MINITABLE

PRECISION MINIATURE

Air Indexing Table

KAMO SEIKO CORPORATION

Offered
Through

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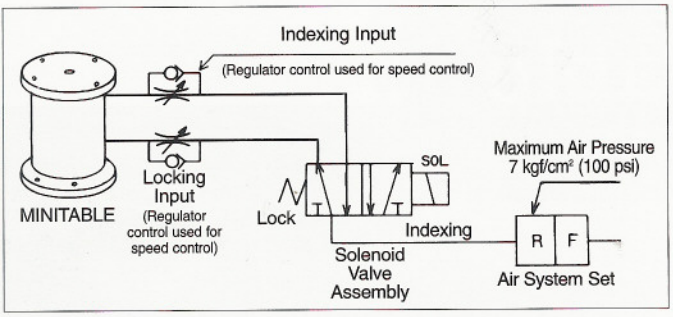
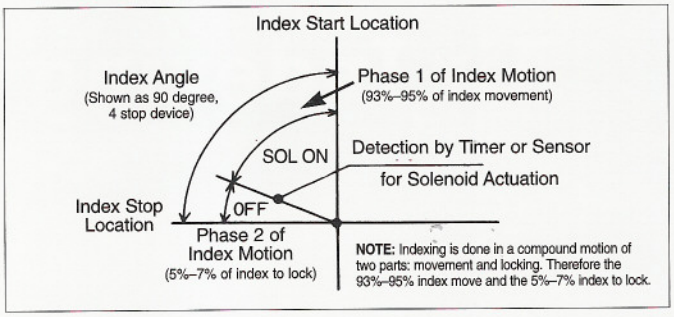
■ MINITABLE CHARACTERISTICS

The Kamo Seiko MINITABLE is a precise indexing table featuring extremely high positioning accuracy in a very compact and robust package. The table rotation is uniform, with rotating torque being proportional to air pressure applied. A simple four-way valve arrangement allows the MINITABLE to be installed easily with a wide range of applications in mind. Due to the locking pin mechanism utilized, the MINITABLE provides holding torque and accuracy compatible with its performance. With either base mounting or flange mounting available as standard, the MINITABLE can be mounted in various orientations without sacrificing performance.

■ PLUMBING METHOD



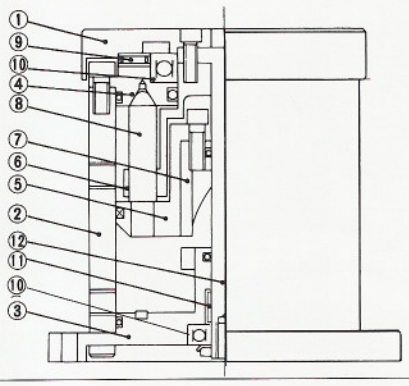
■ INDEXING METHOD



■ INTERNAL CONSTRUCTION

1 Rotating Table
2 Housing
3 Follower Cap
4 Hole Cap
5 Piston
6 Indexing Plate
7 Bell Cam
8 Locating Pin
9 Thrust Bearing
10 Shaft Bearing
11 Roller Clutch
12 Shaft

- All Sealing Parts are per JIS
- Model MT 70 does not include items #9, thrust bearing, and #11, roller clutch.



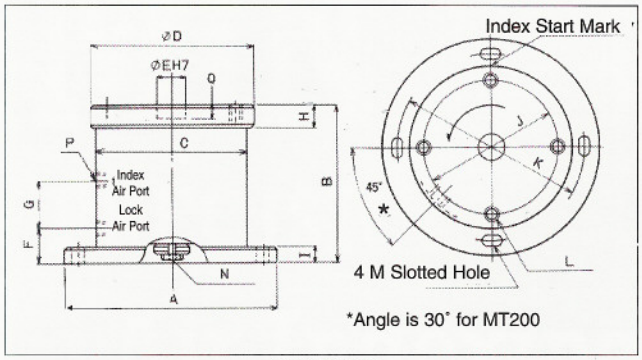
■ SPECIFICATIONS

NOTE: Indexing torque must be reduced by 40% of rated torque in models with two (2) index stops.

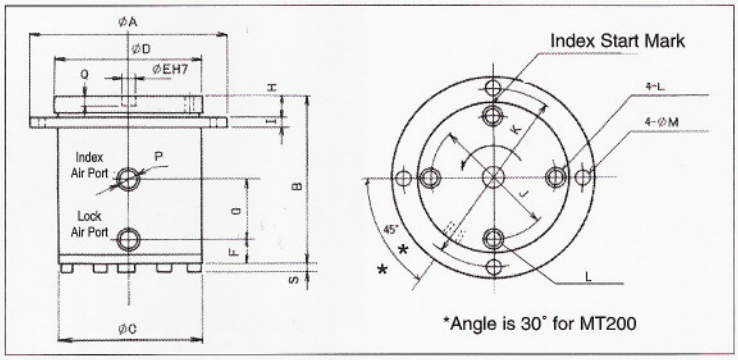
MODEL		UNIT	MT70	MT100	MT125	MT200	NOTES
Index Number		stops	2,3,4,5,6	2,3,4,5,6,8	2,3,4,5,6,8,10,12	3,4,5,6,8,10,12, ⑯	16 stops is semi-standard
Index Speed		seconds	0.5	0.8	1.0	1.5	no load value
Index Accuracy		arc • min	±4	±3	±2	±1	arc minutes
Max Load Weight		kg (lbs)	1 (2.2)	3 (6.6)	15 (33)	35 (77)	high speed not achievable when at full load weight
Maximum Air Pressure		kg/cm² (psi)	7 (100)	7 (100)	7 (100)	7 (100)	(psi)
Index Torque		N • m (lb • in)	1.96 (17)	11.7 (104)	29.4 (260)	98 (867)	air pressure @ 60 psi
Internal Volume		cm³ (ci)	36 (2.2)	250 (15)	500 (30)	1300 (79)	cubic inches
Body Weight		kg (lbs)	2 (4.4)	5 (11)	10 (22)	30 (66)	
Platen Diameter		MM (in)	120 (4.8)	180 (7.2)	250 (10)	400 (16)	maximum recommended diameter
Rotating Direction		DIR	R • L	R • L	R • L	R • L	when viewed from rotating surface
Minimum Holding Torque		N • m (lb • in)	2.9 (26)	11.7 (104)	29.4 (260)	98 (867)	
Maximum Load Inertia		kg•cm² (lb•in•sec²)	75 (.07)	500 (.44)	5000 (4.4)	30,000 (26.5)	See inertia formula for definition
Operating Load	Thrust Load	N (lbs)	98 (22)	980 (220)	2940 (660)	4900 (1100)	maximum external load of stopped table
	Radial Load	N (lbs)	29 (6.6)	245 (55)	490 (110)	1960 (440)	maximum external load of stopped table
Lubrication			NR	NR	NR	NR	

■ DIMENSIONS

NOTE: Rotation shown by arrow is left. When designing, observe the mounting hole position as reference to index start mark.



STANDARD



FLANGE

MT SERIES DIMENSIONS

MODEL NO. \ LETTER	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	S
MT70S	98	105	70	72	8	15	40	14	8	60	86	M 5 × 8	6×15°	—	M5	3	—
MT70F	98	100	70	72	8	10	40	15	5	60	86	M 5 × 8	6	—	M5	3	5
MT100S	130	125	100	105	12	22	48	19	10	90	115	M 6 × 10	6.5×15°	M 6 × 10	RC 1/8	7	—
MT100F	134	120	100	105	12	17	48	16	6	90	120	M 6 × 10	6.5	M 6 × 10	RC 1/8	7	6
MT125S	155	150	120	125	20	22	68	19	10	110	140	M 6 × 10	9×15°	M 6 × 12	RC 1/4	7	—
MT125F	160	145	120	125	20	17	68	15	8	110	144	M 6 × 10	9	M 6 × 12	RC 1/4	7	6
MT200S	230	185	180	190	25	32	70	30	12	160	205	M10 × 20	11×6°	M10 × 15	RC 1/4	13	—
MT200F	240	180	180	190	25	27	70	24	12	160	220	M10 × 20	11×6°	M10 × 15	RC 1/4	13	6

ALL DIMENSIONS ARE METRIC

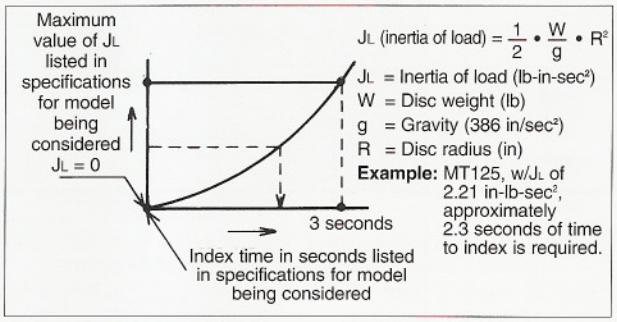
■ MODEL SELECTION

MT (70, 100, 125, 200), (S, F), (NUMBER OF INDEXES), (R, L)

Example: MT70-S-4 - R is defined as a Model MT70 with a Standard mount, 4 stops and rotating to the Right when viewed from the top.

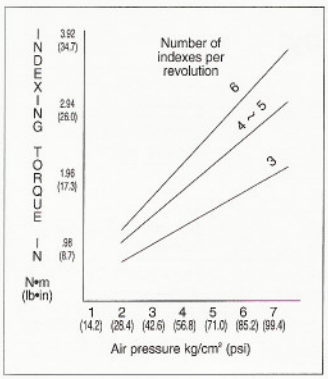
■ INERTIA / INDEX TIME RELATIONSHIP

When designing the MINITABLE into an application, the load inertia, J_L should be within the specified values. There is a correlation between indexing time and load inertia so care should be taken when determining the MINITABLE model and the indexing time to inertia load relationship. The indexing time listed in the specifications is a no load time. The index time for a load of maximum J_L is set for 3 seconds. Calculated values of J_L should be proportionally distributed between the no load index time and the 3 second maximum load time.

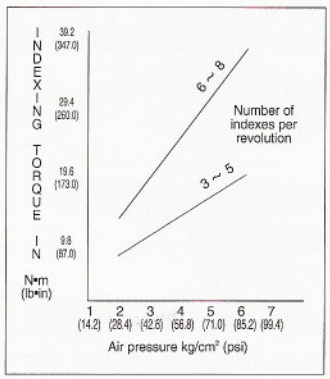


■ AIR PRESSURE / INDEX TORQUE RELATIONSHIP

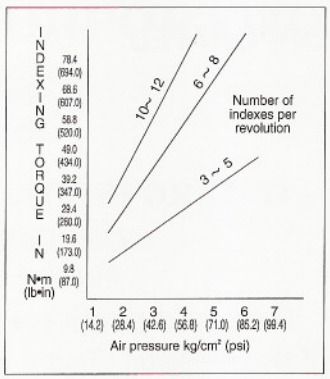
In order to maintain long-term reliability in the MINITABLE selected, it is advised that the units be operated within the area shown in the charts below.



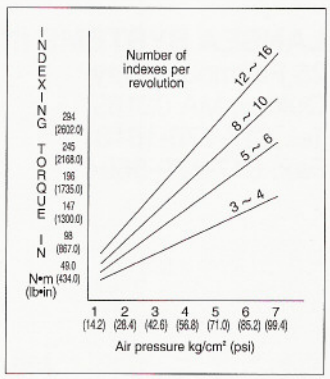
MT70



MT100



MT125



MT200